

**Comments to the ACC on Proposed EPS Changes
Provided by the Solar Thermal Power Division of the
Solar Energy Industries Association (SEIA)
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We have reviewed the materials presented in the June 25 ACC workshop and the proposals for EPS growth beyond the current 1.1% energy target. We note that participants most often suggested that a rate based program be established to guide and support increases in the amount of Arizona's electricity supplied by renewable energy. A typical example is the recommendation to pursue a Commercial Ready Renewable Energy Standard, or CRRES. Whether CRRES or a similar variant, we support this type of rate based approach and believe it represents the most cost effective method for the state's ratepayers.

However, as presented in the workshop, the CRRES programs will not result in the most beneficial programs for Arizona. We believe minor modifications are required if the State is to achieve maximum return on its investment in the overall EPS program. To take full advantage of Arizona's renewable resources, the EPS should contain two fundamental concepts: a solar set-aside and accommodation of large (multi-megawatt) power plants.

Solar set-aside – In recognition of its solar resource, economic growth potential, and energy future, Arizona should continue to favor solar energy in all state sponsored programs regarding energy supply, in particular for programs intended to expand the EPS. Numerous factors suggest this approach:

- Arizona's solar resources are among the finest in the world and dwarf Arizona's other renewable energy resources
- On a dollar for dollar basis, Arizona investment in development of solar energy will result in more in-state business growth than that occurring from investment in conventional or other renewable sources
- Solar development can position Arizona as a major energy exporter
- Establishment of solar facilities provides greater in-state control of energy prices and reduced exposure to out-of-state fuel price volatility
- Governor Napolitano has publicly stated that Arizona's vast solar resource mandates aggressive policies to encourage solar energy development and use
- The Western Governors Association has recently adopted, with Arizona approval, a major renewable energy resolution that includes an initiative for the installation of 1000 MW of concentrating solar power, to be achieved primarily by the four solar rich states of Arizona, New Mexico, Nevada, and California

Accommodation for Large Installations – For most renewable technologies, lowest cost electricity output is achieved in relatively large plant sizes, typically tens of megawatts or larger. This is true for many geothermal installations, several types of biomass, wind energy, and concentrating solar power. As Arizona contemplates methods for increasing its environmental portfolio standard, it is vital that the final standard remain as flexible as possible, particularly

with respect to plant size. We believe the following approaches encourage flexibility in a CRRES-type or other rate based program:

- Growth targets should be established in the ½ % to 1% per year range; this accommodates both smaller distributed technologies and larger plant sizes; this type of aggressive growth results in most favorable returns to Arizona in terms of both immediate energy costs and subsequent technology competitiveness
- Targets should be established on an alternate year basis (i.e., for 2006, 2008, 2010, etc.); this is a step toward traditional utility multi-year planning cycles; it allows utilities more potential choices for fulfilling mandates, accommodates aggregation into larger plant sizes, provides planning flexibility, and results in lower delivered energy costs for most technologies
- Energy cost limitations (cent/kWh ceilings) should not be specified for participation in the expanded EPS program; some of the most important program accomplishments – important to Arizona’s energy future – will be to achieve major cost reductions for those technologies on steep cost reduction curves; indeed a goal of the EPS should be the cost reduction of its renewable energy resources
- Rules should allow importation of renewable energy from other states to facilitate formation of southwestern utility consortia for large plant ownership and sharing of risks that may be involved

An EPS that includes large power plants will encourage the development of concentrating solar power (CSP) technology. This will benefit Arizona because CSP is by far the lowest cost solar electric technology in large installations. Independent studies have shown that with 1000 MW or less of installed capacity the cost of CSP produced energy will fall to the 6 – 9 cent/kWh range, low enough to provide competitively priced power in the state’s intermediate and peak generation markets. Additional installed capacity will result in further cost reduction. By enabling CSP participation in an expanded EPS, Arizona will contribute its share of the Western Governors Association 1000 MW CSP initiative and thereby acquire a permanent, attractively priced, in-state energy supply. This would also be an excellent complement to the workshop proposals that accommodate photovoltaics, in the suggestions to complete the original 1.1% program. This is highly desirable as photovoltaics has few equals as a customer owned energy producer and competes well in other distributed energy applications. An EPS that facilitates the use of both CSP and PV will ensure that Arizona ultimately receives maximum benefit from its solar resource.

We sincerely believe the above suggestions will result in the most benefit to Arizona. The comments to accommodate large installations, in particular, are not strictly solar oriented. Other technologies will benefit from these approaches and utilities will clearly appreciate greater flexibility in executing EPS mandates. In regard to a set-aside in an expanded EPS, the inclusion of a solar requirement resulting in several hundred MWs of solar power would neither restrict other technologies nor burden ratepayers with excessive cost. However, given solar energy’s steep cost reduction curve, it would deliver significantly greater return on investment to the state than other opportunities available.

Inclusion of the above points will strengthen whatever new additions the ACC elects to adopt for the Arizona EPS program and will enhance the legacy resulting from implementation and execution of a revised standard. We request that ACC planners give full consideration to these suggestions.

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